

HAPLOSYLLIS AGELAS, A NEW POLYCHAETOUS ANNELID (SYLLIDAE) FROM THE BAHAMAS

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ABSTRACT

Specimens of the syllid polychaete *Haplosyllis agelas* new species were obtained from the sponge *Agelas dispar*, collected from coral heads near Grand Bahama Island. The new species differs from other members of the genus primarily in the shape of the setae and in its restriction, as currently known, to a single species of sponge from the Bahamas.

Sponges collected for cryptofaunal analysis from coral heads near Grand Bahama Island were found to harbor numerous polychaetes, including an undescribed syllid of the genus *Haplosyllis*. This new species occurred only in the orange demosponge *Agelas dispar*. *A. dispar* is riddled with channels providing habitat for a unique cryptofaunal community, including many other macroinvertebrates as well as polychaetes. Pequegnat and Heard (1979) described the snapping shrimp *Synalpheus agelas* and mentioned some of the other faunal associates of *A. dispar* from Bahamas and northern Gulf of Mexico coral reefs and hard banks. The new species described herein is known only from the Bahamas.

Family SYLLIDAE Grube, 1850
Genus *Haplosyllis* Langerhans, 1879

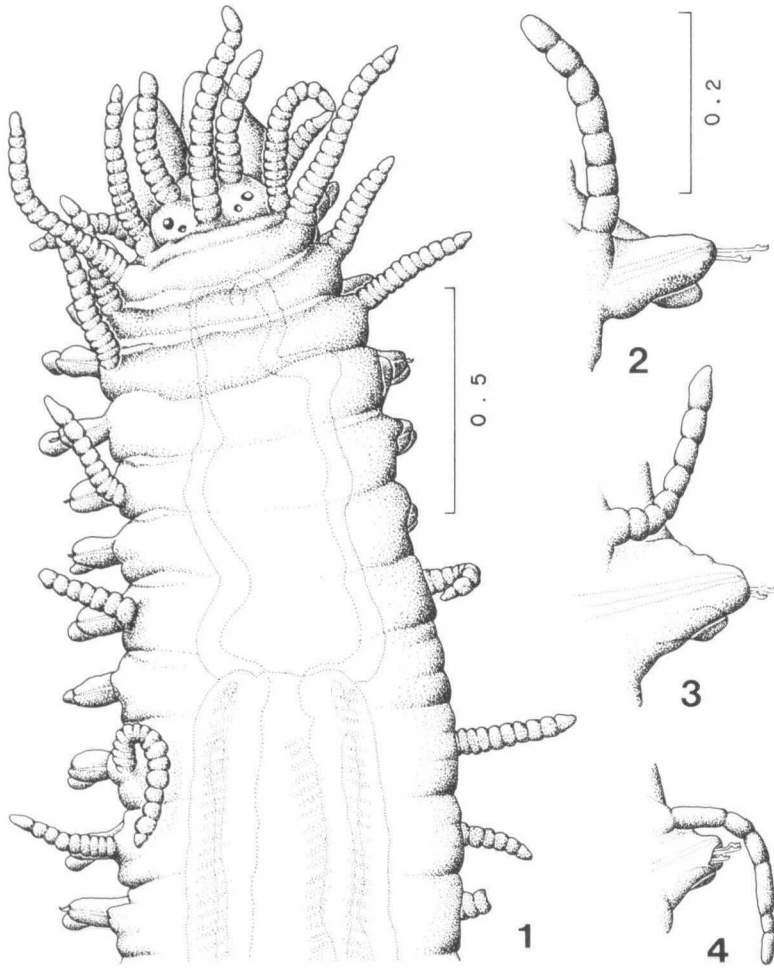
Type-species.—*Syllis* (*Haplosyllis*) *hamata* Claparède, 1868, by monotypy; =*Haplosyllis spongicola* (Grube, 1855).

Gender.—Feminine.

Haplosyllis was described as a subgenus of *Syllis* Savigny, 1818, by Langerhans (1879), and subsequently was raised to genus by Czerniavsky (1881), although the subgeneric designation remained in usage by Fauvel (1923), Day (1967; 1973), Gardiner (1976), and others. Generic status is to be preferred for reasons cited by Verrill (1900) and by Laubier (1968). The setae of *Haplosyllis* species are entirely simple, whereas all other members of the genus *Syllis* have composite or pseudocomposite setae in addition to the simple setae. Furthermore, the number of setae per fascicle is generally much reduced in *Haplosyllis* as compared with *Syllis*.

Members of the genus *Haplosyllis* are typically small, cryptic associates of marine fauna. They are particularly common on coral reefs, where the cosmopolitan species *H. spongicola* (Grube, 1855) dwells in abundance in the interstices of sponges and corals. In comparison, other species of the genus occur very rarely. Six additional species have been listed by Hartmann-Schröder (1978) as commensal with or parasitic on ophiuroids, gorgonian corals and other Octocorallia, and sponges.

Twenty specimens of a new species of *Haplosyllis* were found in a collection of the globular orange demosponge, *Agelas dispar*, from Grand Bahama Island in November 1975. Thirty-two sponges were hand-collected from coral heads in about 20 m depth. The syllids were removed from the internal chambers and canals of the sponges. Each sponge harbored 0-4 individuals of the new species. Examination of 73 *A. dispar*, collected during 1978-79 from the Florida Middle



Figures 1–4. *Haplosyllis agelas* sp. n. (specimens from author's collection): 1, Anterior end; 2, Anterior parapodium; 3, Middle parapodium; 4, Posterior parapodium. All views dorsal. Scale values in millimeters; scale same for Figures 2–4.

Ground coral reef off the west coast of Florida, revealed no specimens of the new species.

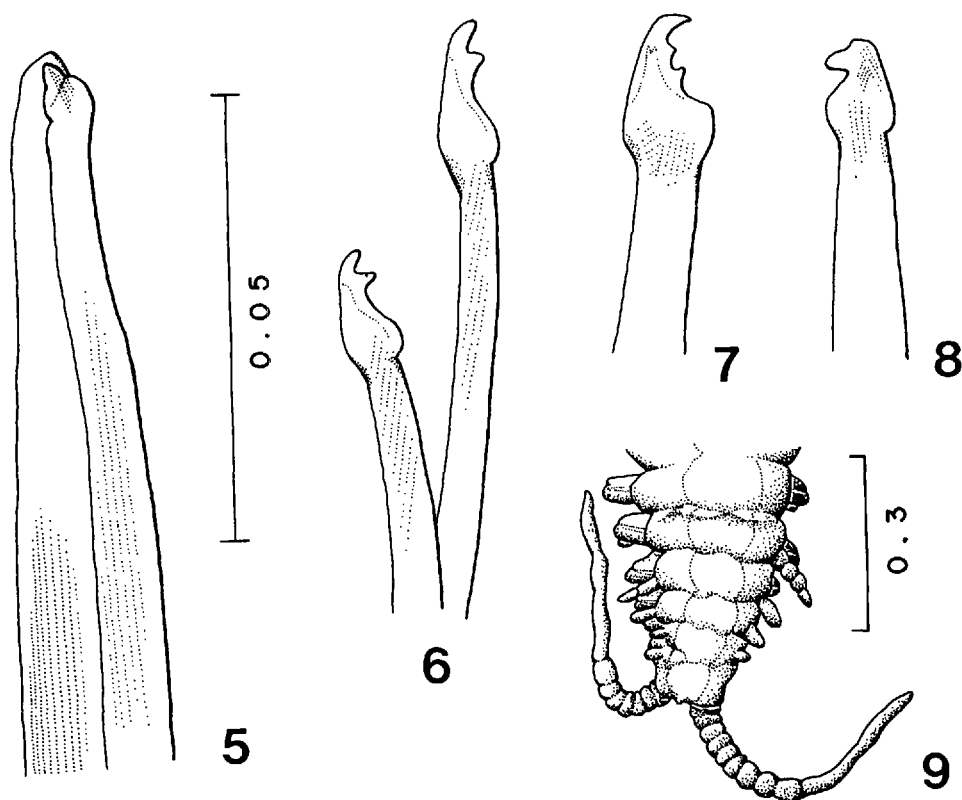
Types of the new species are deposited in the National Museum of Natural History, Smithsonian Institution, Washington, D.C. (USNM), and the Zoologisches Museum der Universität Hamburg, Germany (ZMH).

***Haplosyllis agelas* new species**

Figures 1–9

Material Examined.—Bahamas, 1.5 km south of Lucaya, Grand Bahama Island, from sponge, *Agelas dispar*, attached to coral heads, about 20 m, November 1975—holotype and 4 paratypes (USNM 62008–9); 3 paratypes (ZMH P-16467); and 12 specimens (author's collection).

Description.—Length of holotype 15.8 mm, maximum width including parapodia



Figures 5-9. *Haplosyllis agelas* sp. n. (specimens from author's collection): 5, Two acicula; 6, Two normal setae; 7 and 8, Modified setae showing variations; 9, Posterior end, dorsal view. Scale values in millimeters; scale same for Figures 5-8.

0.9 mm, number of setigers 115. Lengths of 14 complete specimens averaging 16.3 mm (range: 10.5-20.3), widths 0.8 mm (0.6-1.0), number of setigers 101 (83-117). Body subcylindrical, strongly arched dorsally, flattened ventrally, generally widest in proventricular region.

Prostomium oval, somewhat broader than long. Eyes 4, small, reddish in color, lentigerous, in trapezoidal arrangement on posterior half of prostomium, anterior pair slightly larger and farther apart (Fig. 1). Ocular spots 1-2 at bases of palps anterior to lateral antennae, or absent. Median antenna inserted near posterior margin of prostomium between posterior eyes, with 14 (9-17) articles. Lateral antennae inserted on slightly raised lobes near anterolateral margins of prostomium, shorter than median antenna, with 10 (7-12) articles. Palps large, bluntly subtriangular, slightly shorter than lateral antennae, basally contiguous but not united. Paired nuchal organs small ciliated slits between prostomium and peristomium, covered by peristomial flap.

Tentacular or peristomial segment short, asetigerous, about one-half length of following segments. Dorsal tentacular cirri subequal in length to median antenna, with 14 (11-22) articles. Ventral tentacular cirri shorter than lateral antennae, with 7 (5-9) articles.

Parapodia uniramous, subcylindrical, sometimes slightly constricted basally,

anterior parapodia fairly slender (Fig. 2), middle parapodia broadest (Fig. 3), with far posterior parapodia becoming reduced (Fig. 4). Dorsal cirri longest on setiger 1, with 16 (14–20) articles; shorter on setiger 2, with 7 (6–10) articles; longer on setigers 3 and 4, with 10 (9–13) and 13 (8–18) articles, respectively; shorter on setiger 5, with 8 (6–10) articles; thereafter alternating slightly in length, with 8 (5–12) articles in middle region, and 7 (2–10) articles in posterior region. Ventral cirri ovoid, inserted midway on ventrolateral surfaces of parapodia, and about half as long as parapodia.

Each parapodium supported by 2 slender internal acicula with slightly bent or knobbed tips (Fig. 5). Setae simple, with 2 large terminal and subterminal teeth above rounded boss (Fig. 6). Setae of few specimens showing slight variations, such as addition or loss of teeth (Figs. 7, 8). Setae numbering 1–4 per parapodium, sometimes completely retracted (Figs. 2–4).

Pygidium narrower than preceding segments, with small medial posterior knob (Fig. 9). Paired anal cirri inserted posterolaterally, much longer than posterior dorsal cirri, with 12 (8–18) articles, and usually smooth distally.

Pharynx with smooth anterior margin surrounded by 10 soft papillae, with small subterminal middorsal tooth. Length of pharynx 0.8 (0.5–1.1) mm. Length of proventricle 1.1 (0.8–1.4) mm, with 45 (40–49) rows of muscle cells. Length ratio of pharynx to proventricle about 0.7:1. Length to width ratio of proventricle 3.8:1 (2.9–4.7:1).

Two specimens with eggs in coelomic cavity beginning in setigers 31 and 33.

Color.—Preserved specimens, orange to orange-yellow.

Host.—Demosponge *Agelas dispar* Duchassaing and Michelotti, 1864.

Etymology.—The species is named for the genus of its host.

DISCUSSION

Seven species and two subspecies are currently recognized in the genus *Haplosyllis*. These include *H. aberrans* (Fauvel, 1939), from Indochina; *H. anthogorgicola* Utinomi, 1956, from Japan; *H. bisetosa* Hartmann-Schröder, 1960, from the Red Sea; *H. chamaeleon* Laubier, 1960, from the western Mediterranean; *H. dollfusi* (Fauvel, 1933), from the Gulf of Suez; *H. spongicola* (Grube, 1855), from the Adriatic Sea; *H. spongicola brevicirra* Rioja, 1941, from western Mexico; *H. spongicola tentaculata* (Marion, 1879), from France; and *H. trifalcata* (Day, 1960), from South Africa. These species are morphologically quite similar to one another; they are separable primarily in the shape of the setae, and in the host organisms with which each is associated (see Hartmann-Schröder, 1978).

Haplosyllis agelas most closely resembles *H. bisetosa* in the shape of the setae. However, the latter is a much smaller species known only from the Red Sea as an associate of alcyonarian anthozoans. *H. agelas* has distinctly articulated antennae, tentacular and dorsal cirri, whereas they are distally smooth or wrinkled in *H. bisetosa*. The setae of *H. bisetosa* are consistently of two types: an upper one with a terminal sharply-pointed hook well separated from a proximal knob, and 1–2 lower ones with terminal and subterminal teeth and proximal knob similar to the setae of *H. agelas* but more slender. *H. agelas*, on the other hand, has setae of one distinct type, with sporadic aberrant forms. The proventricle of *H. bisetosa* is shorter with fewer rows of muscle cells (about 20).

Haplosyllis agelas differs from other species of the genus in its known asso-

ciation only with the sponge *Agelas dispar*, from a Bahamas coral reef. A collection of another sponge, *Gelliodes digitalis*, from the same locality, was examined and thoroughly dissected, but yielded no specimens of *H. agelas*. Many species of numerous other sponges, including *Agelas dispar*, from the Florida Middle Ground coral reef, also harbored no specimens of *H. agelas*.

ACKNOWLEDGMENTS

I wish to thank Dr. G. Hartmann-Schröder, Zoologisches Institut und Zoologisches Museum der Universität Hamburg, for the loan of a paratype of *Haplosyllis bisetosa*; and Dr. W. D. Hartman, Peabody Museum of Natural History, for identification of the sponges *Agelas dispar* and *Gelliodes digitalis*. Dr. M. H. Pettibone, USNM, generously contributed much helpful information, and editorial comments. Collection of specimens was made possible by a grant from the Benjamin and Roberta Russell Educational and Charitable Foundation Inc. to the University of Alabama Marine Science Program.

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DATE ACCEPTED: November 5, 1981.

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